FIG. 1

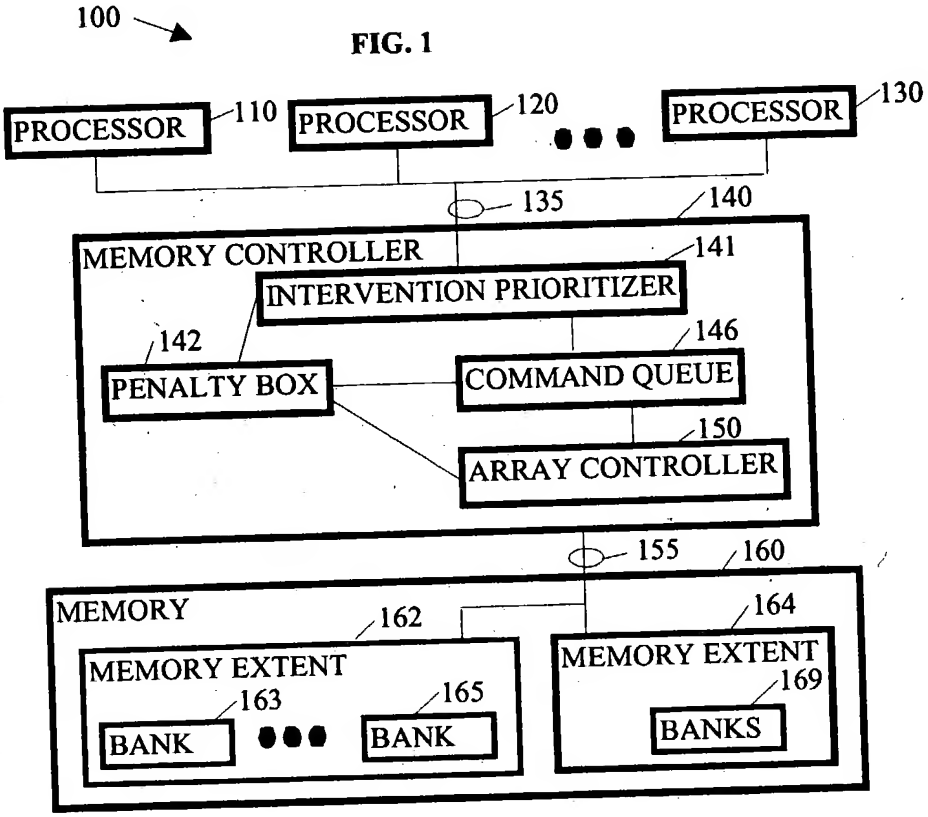

FIG. 3

SEQUENCE TRACKER 300

VALID	EXTENT	BANK	SEQUENCER TO WATCH	
1	2	2	00000	310
1	3	1	00100	320
0	2	3	00010	330
1	1	4	00001	340
1	1	4	00001	350

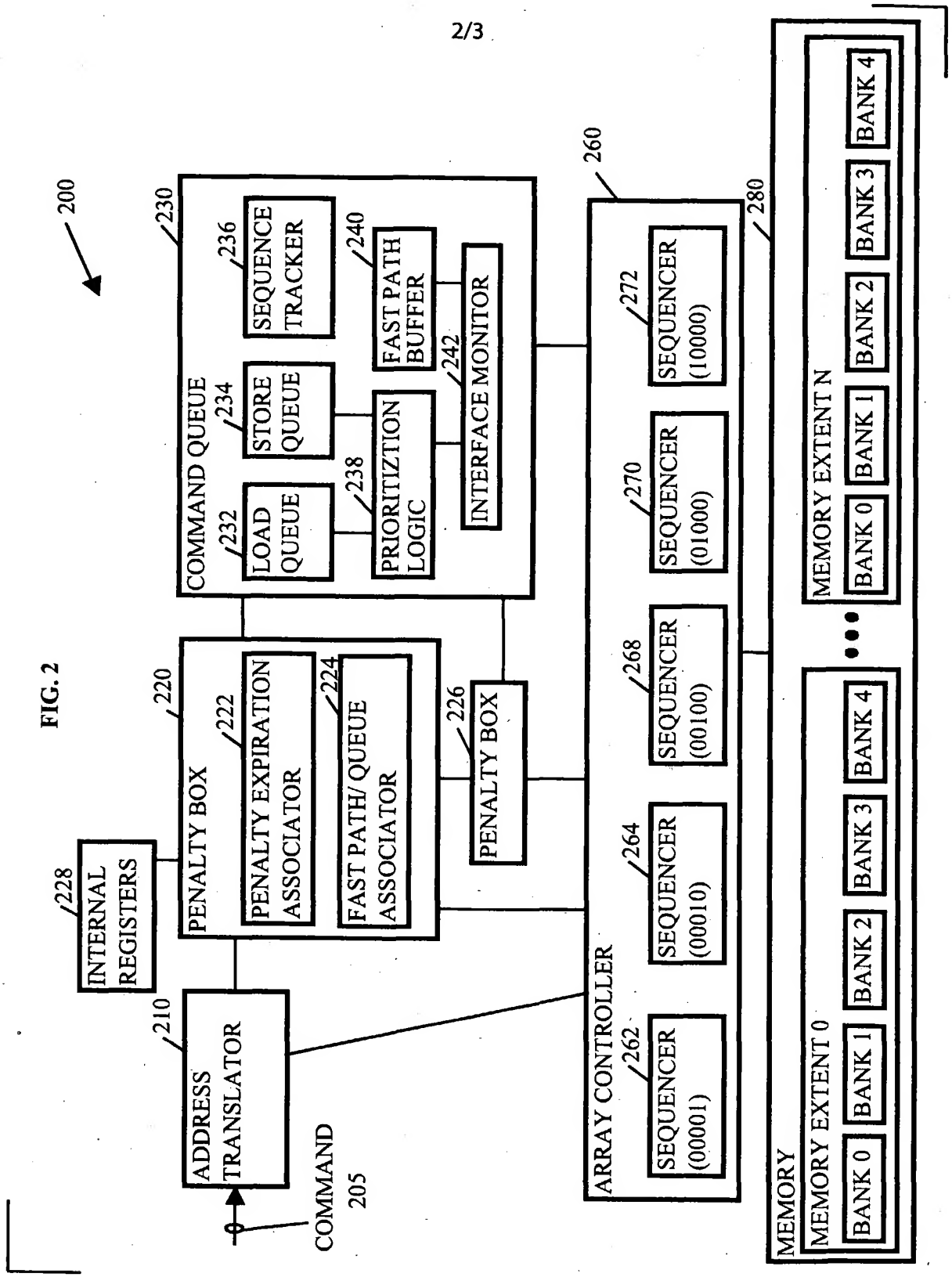
200
COMMAND
205
ADDRESS TRANSLATOR
210
INTERNAL REGISTERS
228
PENALTY BOX
220
PENALTY EXPIRATION ASSOCIATOR
222
FAST PATH/ QUEUE ASSOCIATOR
224
PENALTY BOX
226
COMMAND QUEUE
230
LOAD QUEUE
232
STORE QUEUE
234
SEQUENCE TRACKER
236
PRIORITIZTION LOGIC
238
FAST PATH BUFFER
240
INTERFACE MONITOR
242
ARRAY CONTROLLER
260
SEQUENCER (00001)
262
SEQUENCER (00010)
264
SEQUENCER (00100)
268
SEQUENCER (01000)
270
SEQUENCER (10000)
272
MEMORY
280
MEMORY EXTENT 0
BANK 0
BANK 1
BANK 2
BANK 3
BANK 4
MEMORY EXTENT N
BANK 0
BANK 1
BANK 2
BANK 3
BANK 4

FIG. 2

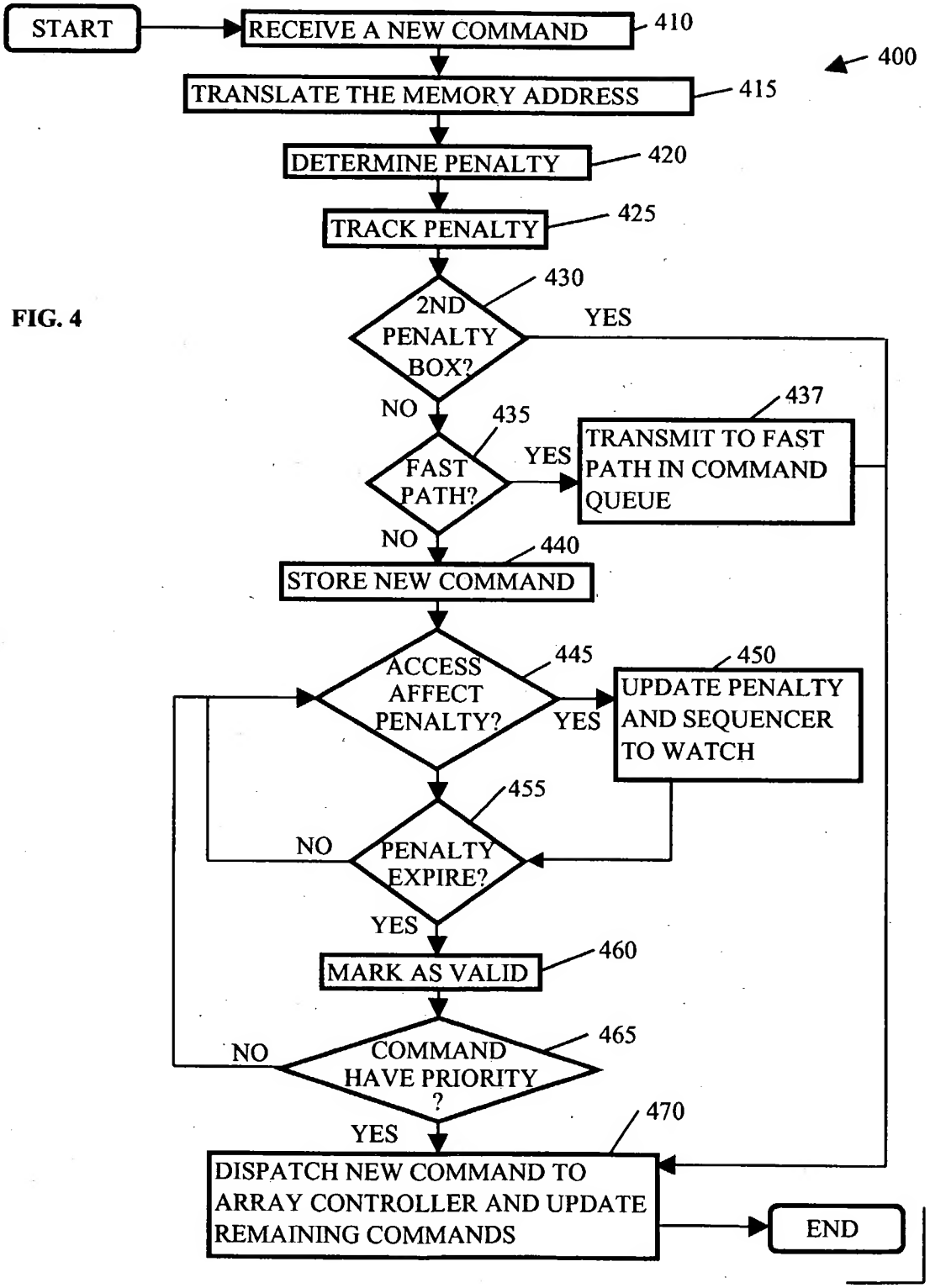
START
RECEIVE A NEW COMMAND
410
400
TRANSLATE THE MEMORY ADDRESS
415
DETERMINE PENALTY
420
TRACK PENALTY
425
2ND PENALTY BOX?
430
YES
NO
FAST PATH?
435
YES
TRANSMIT TO FAST PATH IN COMMAND QUEUE
437
NO
STORE NEW COMMAND
440
ACCESS AFFECT PENALTY?
445
YES
UPDATE PENALTY AND SEQUENCER TO WATCH
450
PENALTY EXPIRE?
455
NO
YES
MARK AS VALID
460
COMMAND HAVE PRIORITY ?
465
NO
YES
DISPATCH NEW COMMAND TO ARRAY CONTROLLER AND UPDATE REMAINING COMMANDS
470
END

FIG. 4